

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
3 March 2005 (03.03.2005)

PCT

(10) International Publication Number  
**WO 2005/020452 A1**

(51) International Patent Classification<sup>7</sup>: **H04B 1/38**

(21) International Application Number:  
PCT/KR2004/002132

(22) International Filing Date: 25 August 2004 (25.08.2004)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:  
10-2003-0058715 25 August 2003 (25.08.2003) KR  
10-2003-0062941

9 September 2003 (09.09.2003) KR

10-2003-0098725 29 December 2003 (29.12.2003) KR

10-2004-0026729 19 April 2004 (19.04.2004) KR

10-2004-0027516 21 April 2004 (21.04.2004) KR

10-2004-0053563 9 July 2004 (09.07.2004) KR

10-2004-0055523 16 July 2004 (16.07.2004) KR

(71) Applicant (for all designated States except US): M2SYS  
CO., LTD [KR/KR]; 3rd Fl., Seoul Electronics Communi-  
cation Building, 68-2, Nae-dong, Ojeong-gu, Bucheon-si,  
Gyeonggi-do 421-160 (KR).

(72) Inventors; and

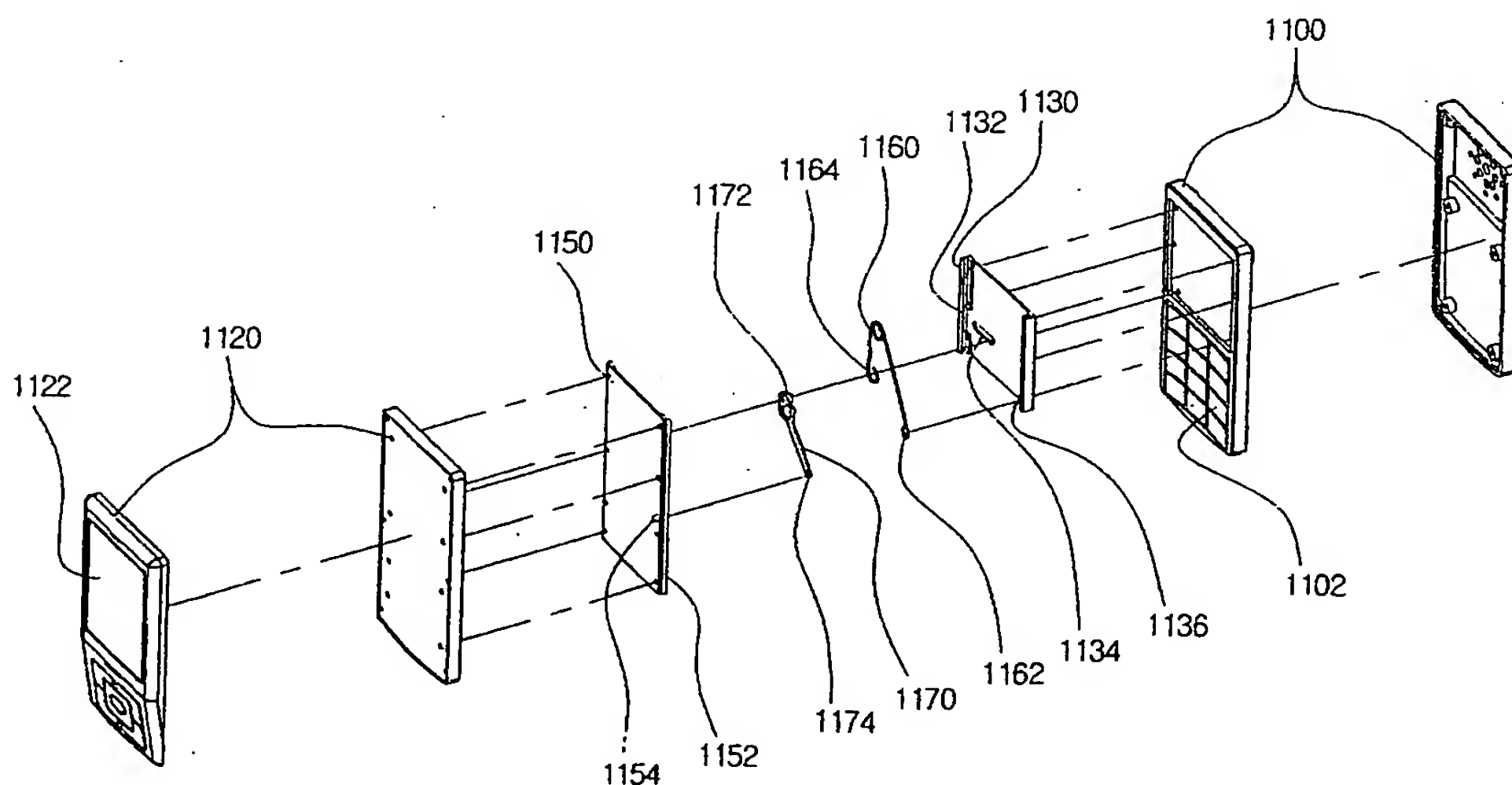
(75) Inventors/Applicants (for US only): LEE, Jun-Hong  
[KR/KR]; 3rd Fl., Seoul Electronics Communi-  
cation Building, 68-2, Nae-dong, Ojeong-gu, Bucheon-si,  
Gyeonggi-do 421-160 (KR). PARK, Jae-Young [KR/KR];  
3rd Fl., Seoul Electronics Communication Building, 68-2,  
Nae-dong, Ojeong-gu, Bucheon-si, Gyeonggi-do 421-160  
(KR). PARK, Chun-Soo [KR/KR]; 3rd Fl., Seoul  
Electronics Communication Building, 68-2, Nae-dong,  
Ojeong-gu, Bucheon-si, Gyeonggi-do 421-160 (KR).

(74) Agent: NAM, Sang-Sun; 9th Fl., Maekyung Media Cen-  
ter, 30, 1-Ga, Pil-dong, Jung-Ku, Seoul 100-728 (KR).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,  
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: A SLIDING OPENING AND CLOSING DEVICE AND A PORTABLE TERMINAL HAVING THE SAME



(57) Abstract: Disclosed are a sliding opening and closing device and a portable terminal having the same. According to the first embodiment of the present invention, a slide plate is linked to a main plate to be slidable in one direction. Also, the main plate supports an elastic part so as to generate an elasticity power in one direction. A power transformation member receives the elasticity power of the elastic member, and transmits the elasticity power to the slide plate in the direction of the opening or the closing according to the position of the slide plate.

WO 2005/020452 A1